

Bellman-Melcor

7575 W. 183rd Street

Tinley Park, IL 60477

LOCAL: 708-532-5000

TOLL FREE: 800-367-6024

bellmanmelcor.com



#521

TECHNICAL DATA

| | | |
|------------------------------------|---|---------------------------|
| NOMINAL COMPOSITION | Copper | Remaining |
| | Tin | 8.0% ± 1.0 |
| | Phosphorus | 0.325% ± 0.025 |
| PHYSICAL PROPERTIES | Color | Copper-Yellow |
| | Solidus | 1620°F (882°C) |
| | Liquidus | 1880°F (1027°C) |
| | Recommended Brazing Temperature | 1880-1980°F (1027-1082°C) |
| | Density (lbs./in³) | 0.32 |
| | Specific Gravity | 8.80 |
| | Electrical Conductivity (%IACS) | 13.0 |
| | Electrical Resistivity (Microhm-cm) | 13.3 |
| USES | #521 is a copper-tin filler metal used for brazing ferrous alloys, such as steel. This alloy is typically used in furnace brazing of steels where use of pure copper is no permissible. | |
| BRAZING CHARACTERISTICS | #521 has good wetting characteristics on ferrous based materials, in particular, steel in furnace brazing applications. Maximum strength and joint integrity are obtained where joint clearance falls within the range of 0.003in. – 0.005in. per side. | |
| PROPERTIES OF BRAZED JOINTS | The properties of a brazed joint are dependent upon numerous factors including base metal properties, joint design, metallurgical interaction between the base metal and the filler metal. | |
| SPECIFICATIONS | #521 alloy conforms to: Unified Numbering System (UNS) C52100 | |
| AVAILABLE FORMS | Wire, strip, engineered preforms, specialty preforms per customer specification, powder and paste. | |

Individuals requiring further information and Engineering Specification Documents may wish to contact the Engineering Society for Advanced Mobility, Land Sea Air and Space, The Society of Automotive Engineers <http://www.sae.org/> (SAE AMS) or The American Welding Society (AWS) <http://aws.org/>

NOTE:

DISCLAIMER

The information and recommendations contained in this publication have been provided without charge & compiled from sources believed to be reliable and to represent the best information available on the subject at the time of issue. No warranty, guarantee, or representation is made by the Bellman-Melcor (A Prince and Izant Company, Inc.) as to the absolute correctness or sufficiency of any representation contained in this and other publications; Bellman-Melcor (A Prince and Izant Company, Inc., Inc. assumes no responsibility in connection therewith; nor can it be assumed that all acceptable safety measures are contained in this (and other publications, or that other or additional measures may not be required under particular or exceptional conditions or circumstances. The company and product names referenced herein are for identification purposes only. All trademarks and registered trademarks are the property of their respective owners.